

AMENDMENTS TO THE CLAIMS:

1-37. (Canceled).

38. (Currently Amended) A system for performing annuloplasty, said system comprising: a plurality of plication staples suitable for application to a mitral valve annulus; and a suture or a band of material adapted to be stapled to the [[a]] mitral valve annulus at fixed positions along the suture or band of material to plicate mitral valve annulus tissue and thereby reduce the length of the mitral valve annulus;

wherein the staples and suture or band of material are adapted to be delivered ~~into a left ventricle~~ to the mitral valve annulus of a heart while the heart is beating.

39. (Previously Presented) A system as in claim 38, further comprising an instrument for delivering the staples to the valve annulus and plicating valve annulus tissue while the heart is beating.

40. (Currently Amended) A system as in claim 39, wherein the system instrument comprises a port adapted to span a wall of the an atrium and provide access therethrough and a staple which is adapted to pass through the port.

41-55. (Canceled).

56. (New) The system of claim 40, wherein the port comprises: a housing having a first end, a second end, and a lumen therethrough; at least one valve disposed in the housing to open and close the lumen; and an inlet connected to the housing, the inlet having an inlet passage in fluid communication with the lumen of the housing, the inlet adapted to transmit a fluid between an exterior of the port and the lumen of the housing.

57. (New) The system according to claim 56, wherein the housing includes a first portion and a second portion, the second portion having a length substantially equal to a thickness of the wall of the atrium.

58. (New) The system according to claim 57, wherein the second portion is flexible relative to the first portion.

59. (New) The system according to claim 57, wherein the inlet connects to the housing adjacent a position of the at least one valve.

60. (New) The apparatus according to claim 56, wherein the housing has first and second retainer members to retain the wall of the atrium therebetween.

61. (New) The system according to claim 60, wherein the first and second retainer members are annular flanges that encircle the exterior surface of the housing.

62. (New) The system according to claim 56, wherein the housing includes a first portion having a first diameter and a second portion having a second diameter smaller than that of the first portion.

63. (New) The system according to claim 62, wherein the second portion has a length substantially equal to a thickness of the wall of the atrium.

64. (New) The system according to claim 62, wherein the second portion is flexible relative to the first portion.

65. (New) The system of claim 40, wherein the port comprises:
a housing having a first end, a second end, and a lumen therethrough;
at least one valve disposed in the housing to open and close the lumen; and
first and second retainer members on the housing, the first retainer member being spaced from the second retainer member a predetermined distance to anchor the chamber wall between the first and second retainer members.

66. (New) The system according to claim 65, wherein the first and second retainer members

comprise first and second flanges disposed on an exterior surface of the housing.

67. (New) The system according to claim 66, wherein a portion of the housing between the first flange and the second flange is flexible relative to a remaining portion of the housing.

68. (New) The system according to claim 66, further comprising an inlet connected to the housing, the inlet having an inlet passage in fluid communication with the lumen of the housing, the inlet passage adapted to transmit a fluid between an exterior of the port and the lumen of the housing.

69. (New) The system of claim 38, wherein the plurality of plication staples are inserted and folded in on themselves at fixed positions along the mitral valve annulus, thereby reducing the length of the mitral valve annulus.

70. (New) The system of claim 69, wherein the plurality of plication staples are attached to the suture or band of material.

71. (New) The system of claim 38, further comprising:

a port including

a housing having a first end, a second end, and a lumen therethrough, the housing configured for insertion through a chamber wall of a heart chamber so that the first end is exterior of the chamber wall and the second end is interior of the chamber wall;

at least one valve disposed in the housing to open and close the lumen; and

an inlet connected to the housing, the inlet having an inlet passage in fluid communication with the lumen of the housing; and

a fluid transport device having one end that attaches to the inlet of the port, another end that attaches to a fluid source, and a fluid channel therebetween to pass a fluid from the fluid source to the inlet, whereby the fluid passes from the inlet through the inlet passage and through the lumen into the heart chamber to maintain an intra-chamber pressure at a desired level.

72. (New) The system according to claim 71, wherein the another end of the fluid delivery device is configured to insert into an artery of the patient to permit passage of arterial blood through the

fluid channel.

73. (New) The system of claim 38, wherein the plurality of plication staples are supplied attached to the suture or band of material.

74. (New) The system of claim 73, wherein the plurality of plication staples is attached to the band of material, and the band of material is DACRON®.

75. (New) The system of claim 39, wherein the instrument comprises an image guidance mechanism.